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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,405	01/15/2004	Flash Parlani	BO1 - 0285US	6096
60483	7590	01/10/2007	EXAMINER	
LEE & HAYES, PLLC 421 W. RIVERSIDE AVE. SUITE 500 SPOKANE, WA 99201			TRAN, DALENA	
			ART UNIT	PAPER NUMBER
			3661	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/10/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER
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20070104

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

Office Action Summary

Application No.

10/758,405

Applicant(s)

PARLINI, FLASH

Examiner

Dalena Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/29/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Notice to Applicant(s)

1. This application has been examined. Claims 1-39 are pending.

The prior art submitted on 4/29/04 have been considered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3-4, 14, 16-17, 27, and 29-30, are rejected under 35 U.S.C. 102(b) as being anticipated by Lin (US 2002/0116126 A1).

As per claim 1, Lin discloses a method comprising: receiving previously recorded altitude information generated by an inertial navigation system (INS) of an aircraft and altitude information generated by a global positioning system (GPS) of the aircraft (see [0113-0118]; [0122-0123]; and [0129-0138]); and determining altitude information of the aircraft based on the received altitude information generated by the INS of the aircraft and altitude information generated by the GPS of the aircraft (see [0059-0068]; [0076-0094]; and [0107-0111]).

As per claim 3, Lin discloses the altitude information generated by the GPS includes differentially corrected altitude information (see [0129-0138]).

As per claim 4, Lin discloses adjusting the altitude information based on known aircraft position defined by a system other than the INS and the GPS (see [0127-0128]).

Claims 14, and 16-17, are program product claims corresponding to method claims 1, and 3-4 above. Therefore, they are rejected for the same rationales set forth as above.

Claims 27, and 29-30, are apparatus claims corresponding to method claims 1, and 3-4 above. Therefore, they are rejected for the same rationales set forth as above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 11, 15, 24, 28, and 37, are rejected under 35 U.S.C.103(a) as being unpatentable over Lin (US 2002/0116126 A1) in view of Hedrick (6462703).

As per claim 4, Lin does not disclose static pressure. However, Hedrick discloses generating a static pressure value based on the determined altitude information (see the abstract; and columns 5-6, lines 52-33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Lin by combining static pressure for high precision altitude measurement.

Also, as per claim 11, Hedrick discloses generating impact pressure based on the generated static pressure and previously recorded pressure information from a pitot system of the aircraft (see columns 3-4, lines 41-53; column 5, lines 13-51; and columns 6-7, lines 34-30).

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Claims 15, and 24, are program product claims corresponding to method claims 1, and 2, and 11 above. Therefore, they are rejected for the same rationales set forth as above.

Claims 28, and 37, are apparatus claims corresponding to method claims 2, and 11 above. Therefore, they are rejected for the same rationales set forth as above.

6. Claims 5-7, 18-20, and 31-33, are rejected under 35 U.S.C.103(a) as being unpatentable over Lin (US 2002/0116126 A1) in view of P. Halpert et al. (2841345).

As per claim 5, Lin does not disclose performing an integration of vertical velocity. However, P. Halpert et al. disclose performing an integration of a temperature adjusted vertical velocity value produced by the INS (see columns 5-6, lines 74-21); and adjusting the result of the integration according to aircraft pitch, roll, and yaw (see column 6, lines 22-48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Lin by combining performing an integration of vertical velocity to derive a signal proportional to the rate of change of altitude.

As per claim 6, Lin discloses performing a curve fit between the INS altitude information and the GPS altitude information (see [0285]).

As per claim 7, Lin discloses performing a least squares fit between the INS altitude information and the GPS altitude information (see [0179-0183]; and [0239]).

Claims 18-20, are program product claims corresponding to method claims 5-7 above. Therefore, they are rejected for the same rationales set forth as above.

Claims 31-33, are apparatus claims corresponding to method claims 5-7 above. Therefore, they are rejected for the same rationales set forth as above.

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7. Claims 8-10, 21-23, and 34-36, are rejected under 35 U.S.C.103(a) as being unpatentable over Lin (US 2002/0116126 A1) in view of R.C. Finvold (3012180).

As per claim 8, Lin does not disclose performing a double integration of a vertical acceleration value. However, R.C. Finvold discloses performing a double integration of a vertical acceleration value produced by the INS (see column 1, lines 10-57); and adjusting the result of the double integration according to aircraft pitch, roll, and yaw (see column 2, lines 10-49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Lin by combining performing a double integration of a vertical acceleration value to provide altitude control signal for the aircraft control system.

As per claim 9, Lin discloses performing a curve fit between the INS altitude information and the GPS altitude information (see [0285]).

As per claim 10, Lin discloses performing a least squares fit between the INS altitude information and the GPS altitude information (see [0179-0183]; and [0239]).

Claims 21-23, are program product claims corresponding to method claims 8-10 above. Therefore, they are rejected for the same rationales set forth as above.

Claims 34-36, are apparatus claims corresponding to method claims 8-10 above. Therefore, they are rejected for the same rationales set forth as above.

8. Claims 12-13, 25-26, and 38-39, are rejected under 35 U.S.C.103(a) as being unpatentable over Lin (US 2002/0116126 A1), and Hedrick (6462703) as applied to claim 11 above, and further in view of Leslie et al. (4750127).

As per claim 12, Lin, and Hedrick do not disclose calibrated airspeed. However, Leslie et al. disclose generating calibrated airspeed based on the generated impact

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pressure (see columns 5-6, lines 14-25); and performing at least one of building a simulation model based on the calibrated airspeed and determining aircraft performance data based on the calibrated airspeed and altitude (see column 6, lines 26-68). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Lin by combining calibrated airspeed to modify or compensation aircraft airspeed signal.

As per claim 13, Leslie et al. disclose building a simulation model is further based on previously recorded data from one or more sensors of the aircraft (see the abstract).

Claims 25-26, are program product claims corresponding to method claims 12-13 above. Therefore, they are rejected for the same rationales set forth as above.

Claims 38-39, are apparatus claims corresponding to method claims 12-13 above. Therefore, they are rejected for the same rationales set forth as above.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- . Lin (6246960)
- . Jensen (6259380)
- . Hayward et al. (6552681)

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 571-272-6968.

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The examiner can normally be reached on M-F 6:30 AM-4:00 PM), off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patent Examiner

Dalena Tran



January 4, 2007